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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,284	11/19/2003	Robert C. Taft	08211/0200252-US0	7398
38845	7590	10/13/2005		
DARBY & DARBY P.C. P.O. BOX 5257 NEW YORK, NY 10150-5257			EXAMINER NGUYEN, HIEP	
			ART UNIT 2816	PAPER NUMBER

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,284	TAFT ET AL.	
	Examiner	Art Unit	
	Hiep Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23, 25 -37 and 41-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23,25-32,34-37, 41 and 44 is/are allowed.
- 6) ☒ Claim(s) 33,42,43 and 45-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

The amendment filed on 08-30-05 has been received and entered in the case. New ground of rejections necessitated by the amendment and added new claims is set forth below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 47 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and/or clarification is required.

Regarding claim 47, the recitation “employing a first gate-to-source voltage to provide a voltage drop between the control input node and another node; and employing a second gate-to-source voltage to provide a voltage drop between the other node and the input node” is indefinite because it is not clear what are the “ first gate-to-source voltage”, “another node”, “a second gate-to-source voltage” and “to provide a voltage drop between the other node and the input node”. It is not clear how the “ voltage drop” is provided between the control input node and another node; and between the other node and the input node. Appropriate correction and/or clarification is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 33 and 42 are rejected under 35 U.S.C. 102 (b) as being anticipated by Li et al. (USP. 6,373,324).

Regarding claims 33 and 42, figure 3 of Li shows a circuit for switching comprising: a switch circuit (312) having an input node (3N1), and output node (3N2) and a control input node (31B); a constant voltage different circuit (313, 314). The difference between the input

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voltage and the control input voltage is constant (one diode drop). The constant voltage different circuit (313, 314) includes a transistor and/ or a first diode.

Claims are rejected under 35 U.S.C. 102 (b) as being anticipated by Singer et al. (US Pat. 6,118,326).

Regarding claims 43 and 45, figure 7 of Singer shows a transmission gate comprising a switch circuit (M1), a boost circuit (Cboot, S2) in response to a supply voltage (V_{++}) (col. 12 lines 31-51), a current source circuit (S4), a constant voltage difference circuit (40, S1). The voltage at node N3 is supplied to the gate of switch (M1) is equal to $V_i + V_{++} - V_{--}$. Note that V_{--} is equivalent to the ground level, thus the gate voltage is $V_i + V_{++}$. The voltage at node (N2) is (V_{in}) (col.12, lines 29-30). Thus, the difference between that gate voltage and the input voltage V_{in} is V_{++} . The difference between the control input voltage and the input voltage is constant. The components of the constant voltage difference circuit (40, S1) comprise transistors. Current source circuit (S4) and first, second components (S1, S7) are connected in series.

Regarding claims 46 and 47, figure 7 of Singer shows a method for multiplexing comprising:

- receiving an input voltage at an input node of switch (M1);
- during an off condition, substantially de-coupling an output node from the input node;
- providing a boost voltage (boost circuit Cboot, S2); and
- during an on condition for a switch circuit that is coupled between the input node and the output node:
 - providing a bias current (current source S4) responsive to the boost voltage; and
 - coupling the input signal to the output node by responsive to the bias current,
- providing a control input signal such that a voltage difference between the control input voltage and the input voltage is substantially constant; and
- providing the control input signal to a control input of the switch circuit (M1),

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wherein maintaining the substantially constant voltage difference between the control input voltage and the input voltage equal to the supply voltage (V₊₊) and not via boost capacitor (C_{boost}).

Allowable Subject Matter

Claims 23, 25-32, 34-37, 41 and 44 are allowed.

Claims 23, 25-32, 34-37, 41 and 44 are allowed because the prior art of records (US Pat. 6,118,326) fails to teach or suggest a transmission gate wherein, the constant voltage difference is substantially equal to the sum of gate-source voltage of the plurality of transistors as called for in claim 23; a transmission gate wherein the boost voltage is higher than the supply voltage and the current source circuit comprises current mirror as called for in claim 25; a transmission gate comprising a constant voltage difference circuit including a first transistor that is coupled between the control input node and another node, wherein the first transistor is arranged in a diode configuration; and a second transistor including a gate that is coupled to the input node, a source that is coupled to the other node as called for in claim 28; a circuit for multiplexing comprising a second switch as called for in claim 34 and a transmission gate wherein the current source includes a current mirror as called for in claim 44.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

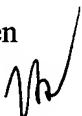
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

10-11-05



TUAN T. LAM
PRIMARY EXAMINER